

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2002-NE-21-AD; Amendment 39-12931; AD 2002-22-06]

RIN 2120-AA64

Airworthiness Directives; Honeywell International, Inc., (Formerly AlliedSignal, Inc. and Textron Lycoming) LF507 and ALF502R Series Turbofan Engines

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule; request for comments.

SUMMARY: This amendment adopts a new airworthiness directive (AD) that is applicable to Honeywell International, Inc., (formerly AlliedSignal, Inc. and Textron Lycoming) LF507 and ALF502R series turbofan engines with combustion chamber liner assembly part number (P/N) 2-131-520-03 installed. This action requires initial and repetitive borescope inspections of the combustion chamber liner assembly to determine if the combustion liner assembly condition is acceptable for continued operation, requires the removal from service of certain serial number (SN) combustion chamber liner assemblies, and provides an optional terminating action to the repetitive borescope inspections. This amendment is prompted by three reports of separation of the combustor dome baffle from the combustion chamber liner assembly resulting in engine combustion chamber liner assembly burn through. The actions specified in this AD are intended to prevent separation of the combustor dome baffle from the combustion chamber liner assembly and the flow of hot combustor gases on oil and fuel lines which could result in engine fire, in-flight shutdown, and damage to the airplane.

DATES: Effective November 18, 2002. The incorporation by reference of certain publications listed in the rule is approved by the Director of the Federal Register as of November 18, 2002.

Comments for inclusion in the Rules Docket must be received on or before December 31, 2002.

ADDRESSES: Submit comments in triplicate to the Federal Aviation Administration (FAA), New England Region, Office of the Regional Counsel, Attention: Rules Docket No. 2002-NE-21-AD, 12 New England Executive Park, Burlington, MA 01803-5299. Comments may be inspected at this location, by appointment, between 8 a.m. and 4:30 p.m., Monday through Friday, except Federal holidays. Comments may also be sent via the Internet using the following address: "9-ane-adcomment@faa.gov". Comments sent via the Internet must contain the docket number in the subject line.

The service information referenced in this AD may be obtained from Honeywell International, Inc. (formerly AlliedSignal, Inc. and Textron Lycoming), Attn: Data Distribution, M/S 64-3/2101-201, PO Box 29003, Phoenix, AZ 85038-9003, telephone: (602) 365-2493; fax: (602) 365-5577. This information may be examined, by appointment, at the FAA, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Robert Baitoo, Aerospace Engineer, Los Angeles Aircraft Certification Office (LAACO), FAA, Transport Airplane Directorate, 3960 Paramount Blvd., Lakewood, CA 90712-4137; telephone (562) 627-5245; fax (562) 627-5210.

SUPPLEMENTARY INFORMATION: The FAA has received three reports of combustion liner assemblies that have been found with burned and missing material. One combustion chamber liner assembly that burned through was found at routine maintenance, one manifested itself as a low thrust condition, and one resulted in an engine in-flight shutdown. Some combustion liner assemblies may have inferior baffle attachment welds. To date, there have been no in-flight engine fires due to separation of the combustor dome baffle from the combustion chamber liner assembly. However, the FAA has determined that LF507 and ALF502R series turbofan engines with combustion chamber liner assembly part number (P/N) 2-131-520-03 installed could experience burn through due to separation of the combustor dome baffle and the flow of hot combustor gases on oil and fuel lines. This condition, if not corrected, could result in engine fire, in-flight shutdown, and damage to the airplane.

Manufacturer's Service Information

The FAA has reviewed and approved the technical contents of Honeywell International, Inc., (formerly AlliedSignal, Inc. and Textron Lycoming) alert service bulletin (ASB).

- ALF/LF A72-1076, Revision 1, dated August 30, 2002. That ASB describes initial and repetitive borescope inspection procedures of the combustion chamber liner assembly part number (P/N) 2-131-520-03. That ASB also lists combustion chamber liner assembly SN's that require removal within 250 cycles from date of receipt of that service bulletin revision (Revision 1).

FAA's Determination of an Unsafe Condition and Required Actions

Since an unsafe condition has been identified that is likely to exist or develop on other Honeywell International, Inc., (formerly AlliedSignal, Inc. and Textron Lycoming) LF507 and ALF502R series turbofan engines of the same type design, this AD is being issued to prevent separation of the combustor dome baffle from the combustion chamber liner assembly and the flow of hot combustor gases on oil and fuel lines which could result in an engine fire, an in-flight shutdown, and damage to the airplane. The actions are required to be done in accordance with the alert service bulletin described previously.

Immediate Adoption of This AD

Since a situation exists that requires the immediate adoption of this regulation, it is found that notice and opportunity for prior public comment hereon are impracticable, and that good cause exists for making this amendment effective in less than 30 days.

Comments Invited

Although this action is in the form of a final rule that involves requirements affecting flight safety and, thus, was not preceded by notice and an opportunity for public comment, comments are invited on this rule. Interested persons are invited to comment on this rule by submitting such written data, views, or arguments as they may desire. Communications should identify the Rules Docket number and be submitted in triplicate to the address specified under the caption ADDRESSES. All communications received on or before the closing date for comments will be considered, and this rule may be amended in light of the comments received. Factual information that supports the commenter's ideas and suggestions is extremely helpful in evaluating the effectiveness of the AD action and determining whether additional rulemaking action would be needed.

Comments are specifically invited on the overall regulatory, economic, environmental, and energy aspects of the rule that might suggest a need to modify the rule. All comments submitted will be available, both before and after the closing date for comments, in the Rules Docket for examination by interested persons. A report that summarizes each FAA-public contact concerned with the substance of this AD will be filed in the Rules Docket.

Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to this action must submit a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket Number 2002-NE-21-AD." The postcard will be date stamped and returned to the commenter.

Regulatory Analysis

This final rule does not have federalism implications, as defined in Executive Order 13132, because it would not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. Accordingly, the FAA has not consulted with state authorities prior to publication of this final rule.

The FAA has determined that this regulation is an emergency regulation that must be issued immediately to correct an unsafe condition in aircraft, and is not a "significant regulatory action" under Executive Order 12866. It has been determined further that this action involves an emergency regulation under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979). If it is determined that this emergency regulation otherwise would be significant under DOT Regulatory Policies and Procedures, a final regulatory evaluation will be prepared and placed in the Rules Docket. A copy of it, if filed, may be obtained from the Rules Docket at the location provided under the caption ADDRESSES.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

PART 39–AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. Section 39.13 is amended by adding the following new airworthiness directive:

AIRWORTHINESS DIRECTIVE

Aircraft Certification Service
Washington, DC



U.S. Department
of Transportation
**Federal Aviation
Administration**

We post ADs on the internet at "www.airweb.faa.gov/rgl"

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

2002-22-06 Honeywell International, Inc., (formerly AlliedSignal, Inc. and Textron Lycoming): Amendment 39-12931. Docket No. 2002-NE-21-AD.

Applicability: This airworthiness directive (AD) is applicable to Honeywell International, Inc., (formerly AlliedSignal, Inc. and Textron Lycoming) LF507 and ALF502R series turbfan engines with combustion chamber liner assembly part number (P/N) 2-131-520-03 installed. These engines are installed on, but not limited to, BAE Systems Avro 146 and BAE 146 series aircraft.

Note 1: This AD applies to each engine identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For engines that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (e) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Compliance with this AD is required as indicated, unless already done.

To prevent separation of the combustor dome baffle from the combustion chamber liner assembly and the flow of hot combustor gases on oil and fuel lines which could result in an engine fire, an in-flight shutdown, and damage to the airplane, do the following:

Removal Requirements

(a) Within 250 cycles-in-service (CIS) after the effective date of this AD, remove from service engines that have combustion chamber liner assemblies, P/N 2-131-520-03, listed by serial number (SN) in Table 1 of this AD. Replace that SN combustion chamber liner assembly with a serviceable part. Table 1 follows:

**TABLE 1.—AFFECTED COMBUSTION CHAMBER LINER
ASSEMBLIES**

Serial Nos. to be removed from service
990992700016.
990992700018 thru 990992700028.
990992700077 thru 990992700078.
990992700081.
990992700083.
990992700085 thru 990992700090.

Initial and Repetitive Inspections

(b) On engines that have combustion chamber liner assemblies with more than 2,000 CIS on the effective date of this AD, perform an initial borescope inspection of combustion chamber liner assembly P/N 2-131-520-03 within 500 CIS after the effective date of this AD in accordance with paragraphs 2(A)(1) through 2(A)(8) of the Accomplishment Instructions of Honeywell alert service bulletin (ASB) ALF/LF A72-1076, Revision 1, dated August 30, 2002.

(c) Thereafter, at each successive 500 CIS, perform a borescope inspection of combustion chamber liner assembly P/N 2-131-520-03 in accordance with paragraphs 2(A)(1) through 2(A)(8) of the Accomplishment Instructions of Honeywell ASB ALF/LF A72-1076, Revision 1, dated August 30, 2002.

Optional Terminating Action

(d) Replacement of combustion chamber liner assembly, P/N 2-131-520-03, with the new improved durability combustion chamber liner assembly, P/N 2-131-520-04, constitutes terminating action to the borescope inspection requirements of paragraph (c) of this AD. Information regarding the replacement of combustion chamber liner assembly P/N 2-131-520-03 with P/N 2-131-520-04 can be found in Honeywell service bulletin ALF/LF 72-1078, dated June 28, 2002.

Alternative Methods of Compliance

(e) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Los Angeles Aircraft Certification Office (LAACO). Operators must submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, LAACO.

Note 2: Information concerning the existence of approved alternative methods of compliance with this airworthiness directive, if any, may be obtained from the LAACO.

Special Flight Permits

(f) Special flight permits may be issued in accordance with §§ 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be done.

Documents That Have Been Incorporated by Reference

(g) The initial and repetitive borescope inspections of combustion chamber liner assembly, PN 2-131-520-03, must be done in accordance with the Honeywell International, Inc. ASB ALF/LF A72-1076, Revision 1, dated August 30, 2002. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Honeywell International, Inc. (formerly AlliedSignal, Inc. and Textron Lycoming), Attn: Data Distribution, M/S 64-3/2101-201, P.O. Box 29003, Phoenix, AZ 85038-9003, telephone: (602) 365-2493; fax: (602) 365-5577. Copies may be inspected at the FAA, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA; or at the Office of the Federal Register, 800 North Capitol Street, NW, suite 700, Washington, DC.

Effective Date

(h) This amendment becomes effective on November 18, 2002.

Issued in Burlington, Massachusetts, on October 22, 2002.

Francis A. Favara,

Acting Manager, Engine and Propeller Directorate, Aircraft Certification Service.

[FR Doc. 02-27433 Filed 10-31-02; 8:45 am]

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